

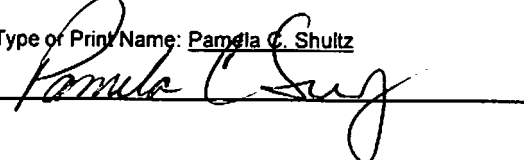
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Nystrom, <i>et al.</i>	§	Group Art Unit:	4163
		§		
Application No	10/596,859	§	Examiner:	Jama, Isaak R
		§		
Filed:	06/27/2006	§	Confirmation No:	1377
		§		
Attorney Docket No: P19103-US1				
Customer No.: 27045				

For: Bandwidth Signalling

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APPLICANTS' APPEAL BRIEF
SUBMITTED UNDER 35 U.S.C. §134, 37 C.F.R. §1.192

This Brief is submitted to appeal the decision of the Primary Examiner as set forth in the Final Official Action dated April 14, 2009, and the Advisory Action dated July 21, 2009, finally rejecting claims 14-26, which are all of the pending claims in this application.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §41.20(b)(2), and to credit any overpayment, to Deposit Account No. 50-1379.

Real Party in Interest

The real party in interest, by assignment, is: Telefonaktiebolaget LM Ericsson (publ)
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Stockholm, Sweden

Related Appeals and Interferences

None.

Status of Claims

Claims 1-13 were previously cancelled and are not appealed. Claims 14-26 are pending in the present application, each of which are finally rejected and form the basis for this Appeal. Claims 14, 15, 17-19, and 22-25, stand rejected, under 35 U.S.C. §103(a), as being unpatentable over Li, *et al.* (U.S. Patent Publication No. 2003/0169681) in view of Engstrom, *et al.* (U.S. Patent No. 5,909,436); claims 16, 20 and 26 as being unpatentable over Li in view of Walton, *et al.* (U.S. Patent Publication No. 2003/0081538); and, claim 21 as being unpatentable over Li in view of Alvesalo, *et al.* (U.S. Patent No. 6,650,655).

Status of Amendments

The claims set out in the Claims Appendix include all entered amendments, *including* minor typographical amendments submitted in the Applicants' response to the Final Office Action dated April 14, 2009. In an Advisory Action dated July 2, 2009, the Examiner stated that those amendments would *not* be entered. Subsequently, however, after a teleconference with the Examiner, he agreed to re-issue the Advisory Action to reflect that the minor typographical amendments *would* be entered; the re-issued Advisory Action mailed on July 21, 2009 notes that the amendments were, in fact, entered.

Summary of Claimed Subject Matter

Claim Element	Specification Reference
14. A method in a multicarrier wireless telecommunication system for radio communication between base stations and mobile user stations, comprising the step of:	Page 6, line 16, <i>et seq.</i>
detecting a presence of an acquisition channel by a mobile station for mobile station search purposes;	Page 4, line 30, <i>et seq.</i> Page 6, line 28, <i>et seq.</i>
transmitting information signals, over the detected acquisition channel, relating to size and location of operational bands of the	Page 6, line 16, <i>et seq.</i>

radio spectrum used by the system;	
wherein the information signals comprise information of the bandwidth and location in the spectrum of the operational bands as part of the information in one or more sub carriers of the bands.	Page 6, line 19, <i>et seq.</i> Page 7, line 2, <i>et seq.</i>

Claim Element	Specification Reference
23. A wireless multicarrier telecommunication system, comprising:	Page 6, line 16, <i>et seq.</i>
a traffic controlling centre; and,	Page 6, line 16, <i>et seq.</i>
transmitting units controlled by said traffic controlling centre, wherein the transmitting units transmit information signals relating to available resources of the system to mobile units on an acquisition channel, wherein the information signals comprise information about the size and location of available bandwidth in a number of operational bands allocated to the system;	Page 6, line 21, <i>et seq.</i>
whereby a mobile unit detects a presence of the acquisition channel and receives the information signals from the transmitting units over the detected acquisition channel.	Page 6, line 28, <i>et seq.</i>

Claim Element	Specification Reference
24. A base station node in a multicarrier telecommunication system, comprising:	Page 6, line 16, <i>et seq.</i>
transmitting means for transmitting information relating to properties of available operational bands of the spectrum allocated to the system, wherein the transmitting means include means for transferring data related to size and location of the available operational bands on an acquisition channel.	Page 6, line 21, <i>et seq.</i>

Claim Element	Specification Reference
25. A mobile station node in a multicarrier telecommunication system, comprising:	Page 6, line 28, <i>et seq.</i>
means for detecting an acquisition channel;	Page 6, line 28, <i>et seq.</i>
means for receiving information relating to size and location of available operational bands in terms of size and location in the radio spectrum from the acquisition channel.	Page 6, line 30, <i>et seq.</i>

The specification references listed above are provided solely to comply with the USPTO's current regulations regarding appeal briefs. The use of such references should not be interpreted to limit the scope of the claims to such references, nor to limit the scope of the claimed invention in any manner.

Grounds of Rejection to be Reviewed on Appeal

- 1.) Whether claims 14, 15, 17-19, and 22-25 are patentable, under 35 U.S.C. §103(a), over Li, *et al.* (U.S. Patent Publication No. 2003/0169681) in view of Engstrom, *et al.* (U.S. Patent No. 5,909,436);
- 2.) Whether claims 16, 20 and 26 are patentable, under 35 U.S.C. § 103(a), over Li in view of Walton, *et al.* (U.S. Patent Publication No. 2003/0081538); and,
- 3.) Whether claim 21 is patentable, under 35 U.S.C. § 103(a), over Li in view of Alvesalo, *et al.* (U.S. Patent No. 6,650,655).

Arguments

- 1.) **Claims 14, 15, 17-19, and 22-25 are patentable, under 35 U.S.C. §103(a), over Li, *et al.* (U.S. Patent Publication No. 2003/0169681) in view of Engstrom, *et al.* (U.S. Patent No. 5,909,436)**

In the Final Office Action dated April 14, 2009, the Examiner rejected claims 14, 15, 17-19, and 22-25 as being unpatentable over Li, *et al.* (U.S. Patent Publication No. 2003/0169681) in view of Engstrom, *et al.* (U.S. Patent No. 5,909,436). In the prior office action dated October 3, 2008, the Examiner rejected claim 14 as *anticipated* by Li. In the Final Office Action, the Examiner withdrew that rejection and acknowledged that "Li is silent to detecting a presence of an acquisition channel by a mobile station for mobile station search purposes and that the detected acquisition channel relates to size and location of operational bands." (Final Office Action; page 3, line 13; emphasis added) What claim 14 actually recites, however, is "transmitting information signals, over [a] detected acquisition channel, relating to size and location of operational bands of the radio spectrum used by the system; wherein the information signals comprise

information of the bandwidth and location in the spectrum of the operational bands as part of the information in one or more sub carriers of the bands." Engstrom fails to teach those claim elements.

The purpose of Applicants' invention is to inform a mobile station which *operational bands* of radio spectrum are used by the wireless system, including the size and location of such bands; the information signals transmitted on a dedicated acquisition channel include that information as part of the information in one or more sub carriers of the operational bands."

In looking to the teachings of Engstrom to overcome the acknowledged deficiencies in the teachings of Li, the Examiner notes that Engstrom discloses "[transmitting] an acknowledgement on the AGCH together with data informing the mobile station which sub-carriers will be employed for a DICH (dedicated information channel) and DCCH (dedicated control channel)." Engstrom only teaches transmitting data informing a mobile station which sub-carriers will be employed for a dedicated information channel and a dedicated control channel; i.e., Engstrom does not teach transmitting information that identifies the operational bands of radio spectrum used by the wireless system. In contrast, as those skilled in the art understand, an operational band includes a series of sub-carriers, as illustrated in Figure 1 of the application; illustrated are operational bands I, II and III, of which band II is shared by network operators A and B (see claim 21). It is information regarding the size and locations of such operational bands that is transmitted on a dedicated acquisition channel according to the principles of the Applicants' invention, which is not taught by Engstrom. Accordingly, claim 14 is not obvious over Li in view of Engstrom.

Whereas independent claims 23-25 recite limitations analogous to those claim 14, those claims are also not obvious over Li in view of Engstrom. Furthermore, whereas claims 15, 17-19 and 22 are dependent from claim 14, and include the limitations thereof, they are also not obvious in view of those references.

2.) Claims 16, 20 and 26 are patentable, under 35 U.S.C. § 103(a), over Li in view of Walton, et al. (U.S. Patent Publication No. 2003/0081538)

The Examiner rejected claims 16, 20 and 26 as being unpatentable over Li in view of Walton, *et al.* (U.S. Patent Publication No. 2003/0081538). Claims 16 and 20 are dependent from claim 14 and claim 26 is dependent from claim 25, however, which the Examiner rejected as being unpatentable over Li in view of Engstrom. The Applicants, therefore, have treated the Examiner's rejection of claims 16, 20 and 26 as based on Li in view of *Engstrom* and further in view of Walton. As established *supra*, claims 14 and 25 are not obvious over Li in view of Engstrom, and the Examiner has not pointed to any teaching in Walton to overcome the failure of those references to teach the transmission of information regarding the size and locations of operational bands on a dedicated acquisition channel. Therefore, claims 16, 20 and 26 are patentable over the teachings of Li, Engstrom and Walton.

3.) Claim 21 is patentable, under 35 U.S.C. § 103(a), over Li in view of Alvesalo, et al. (U.S. Patent No. 6,650,655).

The Examiner rejected claim 21 as being unpatentable over Li in view of Alvesalo, *et al.* (U.S. Patent No. 6,650,655). Claim 21, however, is dependent from claim 14, which the Examiner rejected as being unpatentable over Li in view of Engstrom. The Applicants, therefore, have treated the Examiner's rejection of claim 21 as based on Li in view of *Engstrom* and further in view of Alvesalo. As established *supra*, claim 14 is not obvious over Li in view of Engstrom, and the Examiner has not pointed to any teaching in Alvesalo to overcome the failure of those references to teach the transmission of information regarding the size and locations of operational bands on a dedicated acquisition channel. Therefore, claim 21 is patentable over the teachings of Li, Engstrom and Alvesalo.

CONCLUSION

Claims 14-26 are patentable over the cited references and the Applicants request that the Examiner's rejections be reversed and the application be remanded for further prosecution.

Respectfully submitted,



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CLAIMS APPENDIX

1-13. (Cancelled)

14. (Previously Presented) A method in a multicarrier wireless telecommunication system for radio communication between base stations and mobile user stations, comprising the step of:

detecting a presence of an acquisition channel by a mobile station for mobile station search purposes;

transmitting information signals, over the detected acquisition channel, relating to size and location of operational bands of the radio spectrum used by the system;

wherein the information signals comprise information of the bandwidth and location in the spectrum of the operational bands as part of the information in one or more sub carriers of the bands.

15. (Previously Presented) The method of claim 14, wherein the location information is explicitly signalled or implicitly derivable from synchronisation signals.

16. (Previously Presented) The method of claim 14, wherein the signalling is received by the mobile user stations which detect the information about available blocks of spectrum and stores it into a memory.

17. (Previously Presented) The method of claim 14, wherein the size information is repeated regularly in subsequent carriers, or sub-carriers, of the operational band.

18. (Previously Presented) The method of claim 14, wherein the information comprises the start and stop frequencies of the band and, thereby, the bandwidth.

19. (Previously Presented) The method of claim 14, wherein the information comprises an identifying number representing the size and location of available operational bands.

20. (Previously Presented) The method of claim 16, wherein the mobile user stations repeatedly scan the information signalling for updating its memory about changing conditions relating to the operational bands.

21. (Previously Presented) The method of claim 14, wherein the operational bands belong to different network operators and wherein the subscribers of an operator may partly or wholly have access to the operational bands of another operator.

22. (Previously Presented) The method of claim 14, wherein a mobile user station requests access to a multicarrier band with N carriers for downloading information, comprising the steps of:

the mobile station searching the radio interface for an N-carrier band by looking for location and size information;

the communication system assigning a free band with N+ ϵ carriers to the mobile upon the request where ϵ is zero or a small number compared to N; and,

the mobile station downloads the information.

23. (Previously Presented) A wireless multicarrier telecommunication system, comprising:

a traffic controlling centre; and,

transmitting units controlled by said traffic controlling centre, wherein the transmitting units transmit information signals relating to available resources of the system to mobile units on an acquisition channel, wherein the information signals comprise information about the size and location of available bandwidth in a number of operational bands allocated to the system;

whereby a mobile unit detects a presence of the acquisition channel and receives the information signals from the transmitting units over the detected acquisition channel.

24. (Previously Presented) A base station node in a multicarrier telecommunication system, comprising:

transmitting means for transmitting information relating to properties of available operational bands of the spectrum allocated to the system, wherein the transmitting means include means for transferring data related to size and location of the available operational bands on an acquisition channel.

25. (Previously Presented) A mobile station node in a multicarrier telecommunication system, comprising:

means for detecting an acquisition channel;

means for receiving information relating to size and location of available operational bands in terms of size and location in the radio spectrum from the acquisition channel.

26. (Previously Presented) The mobile station of claim 25, wherein said mobile station further comprises memory means for storing the operational band relating data.

* * *

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.